

Literature Review

The Effects of Technology on Auditory Comprehension and Oral
Production of a Foreign Language

As a foreign language teacher, I find myself struggling to find ways of getting my students over the “hump” of moving from reading and writing in the target language to speaking it and comprehending it when they hear it spoken (especially by a native speaker). I have worked to include many oral activities and discussions in my classes and I believe there has been improvement, but there is still room for more.

Having taken many technology courses as a part of my degree program, I wonder how incorporating some of those tools might help our situation. I know from using some of the technology with my students previously that it can add interest and motivation to their (and my) work. And, through personal discussions, I know that many of them share my interest in listening to music on MP3 players. So, my purpose in this research is to find out how the use of technology, specifically digital audio files and online discussions (synchronous as well as asynchronous), will affect my students’ levels of auditory comprehension and oral production of a foreign language. I want to know:

- How will integrating the use of online discussions affect my students’ anxiety of producing the target language in face-to-face discussions?
- How will integrating the use of online discussions affect the fluency of my students’ oral communication in the target language?
- How will the use of digital audio files (e.g. Podcasts) affect my students’ levels of auditory comprehension?

This review of the literature addresses several topics associated with the use of technology in foreign language classes. First there is a review of the

history of the language lab and its effects on education. Second, there will be a discussion on the most recent technologies and how they might be used in a modern language lab to affect a foreign language class. And, finally, there will be a discussion on the effect that anxiety can have on students learning a foreign language.

THE LANGUAGE LAB-History

Ever since Thomas Edison invented the phonograph in 1877, foreign language teachers have been using audio recordings in their classes (Roby, 2006). The labs were first used to increase students' pronunciation as the students would listen to a native speaker and then attempt to mimic what they heard. It was during this time that the field of phonetics was born in effort to teach proper foreign language pronunciation, yet there are no articles of the time that discuss a controlled study of the value of the phonograph in foreign language classes (Roby, 2006). This lack of empirical evidence of the effects of the language lab is a problem that will continue to plague the lab for years to come. Soon, the invention of the phonograph-recording machine made it possible for the students to listen to their own voices and compare them to the native speaker models.

The 1930s saw a decline in the use of the phonograph in the language lab in preference to the radio. The literature explains that this invention was used for a variety of education-related purposes, such as on-campus school and university broadcasts to in-service teacher support and training and adult literacy

and basic education campaigns (Chan, 2005). However, it does not explain how the radio was used for foreign language classes, specifically.

The year 1946 is considered to mark the beginning of the modern language laboratory movement (Roby, 2006). It was during this time that the military achieved success from its language training during the war. What people didn't realize was that the techniques the military used were not their own creation. It was actually a wartime civilian creation: The Intensive Language Program of the American Council of Learner Societies, funded by the Rockefeller Foundations. But, the Army got the credit. (Roby, 2006). Motivated by what had been seen from the military, many universities began using their own laboratories. They had modified the set up of the labs to introduce booths or carrels for acoustic isolation, a move that would make their students feel isolated from the rest of the class.

The language lab made considerable progress in the 50s and 60s, thanks to Federal dollars flowing in for the National Defense of Education Act that was written specifically for the improvement of math, science and foreign language classes. The audiocassette was also introduced at this time. The cassettes were lower priced and used lighter machines, but had poor audio quality and difficult editing issues. Eventually, the repeat, skip-back function, and the speech compressor-expander were added features to the audiocassette player. (Roby, 2006). But, even with those improvements, the cassettes would not become heavily used in language labs for nearly two decades, partially due to the quality

and editing issues, but also because of the lack of literature proving the language lab to be a worthwhile investment for schools.

The boon of language labs ended in the late 60s as the Federal funds were cut. Many labs sat empty or became glorified study halls. But, the Audio Lingual approach to foreign language teaching was born and gaining momentum (Roby, 2006). The University community was in agreement on the benefits of the labs offering individualized instruction and maintained them with their own funding.

Then, in the 80's, thanks to the domestication of the tape recorder (invented 20 years earlier), the language labs again were gaining interest. Federal monies flowed again for the use of technology in foreign language programs. But, the language labs of the 80s were not like the phonetics labs of previous years. These labs were multi-media creations. The VCR added video capabilities to lab sessions and the personal computer was becoming more widespread, allowing for activities of reading and writing in the labs as well. (Roby, 2006). As educators, we must keep in mind the importance of attitudes and motivation in the foreign language learning process. "Affective factors determine the effort a student makes in and outside of the classroom to obtain input and to use the language for communicative purposes" (Schultz, 1991, p.21).

Many things happened in the field of education at this time that helped the language lab hold its interest through the 80s. For example, new Federal monies were again flowing for the use of technology in foreign language classes. The

US Department of Education funded the first National Foreign Language Resource Centers and workshops offering instruction for teachers on how to use the technology were available. This is one of the best things that could've happened for the labs, as it is also likely one of the main problems the labs in the 60s had. Even if teachers are given the latest technology, they are not likely to use it unless they have been given proper training for it.

Unfortunately for the labs, but fortunately for the students, the language lab once again drifted out of the popular lexicon of foreign language programs in the early 90s. This time was different, though. It didn't happen because Federal monies were cut, or because the public thought they were a waste of money due to poor research results. This time, it was the computer's fault. The tools and software that have been invented for use with the computer have made the number and quality of possible uses in the language lab increase dramatically. But, schools have moved from having a lab dedicated to foreign language study, to a computer lab that can be used by any curricular area. This makes the money spent for lab equipment and software better spent in the eyes of the public and also moves the students from those alienating carrels and low quality audiotapes.

LANGUAGE LAB-Research

The ebb and flow of interest in the language laboratory is symbolic of the research on its effects on language learning. There are many articles written about the benefits of using language labs, but they contain very little validated research to back their claims. And, of the few methodological research projects

that were done, the results are very ambiguous. One researcher may have found results to validate the effects of the lab, while another would find just the opposite. And, in many cases, critics questioned the research protocol used, or information that was used or left out of the reports caused cynicism toward their claims.

One example of such research was done by Keating in 1961-1962 on 5000 subjects in 21 New York City school districts. The study compared lab users and non-lab users on measures of reading comprehension, listening comprehension and speech production (Roby, 2006). Keating's results showed a "significant finding in favor of the lab groups on speaking among first year students." (Roby, 2006, p. 533). Otherwise, there were several instances when the non-lab groups scored significantly higher than the lab groups. Keating's results were quickly disputed for numerous methodological flaws, but because there was no literature showing a defense of his claims, Roby suggests that the study was simply "dismissed by the scholarly community of the day" (p.533). However, as Roby explains, the public seemed to be of a different mind, holding the belief that language laboratories were not useful and were a large waste of money (p.533).

Soon after Keating's study, Lorge conducted two studies in New York City as well that seemed to be more accepted by the scholarly community of the day. His purpose was to see "whether the teacher improves the teaching-learning situation by using the lab as a teaching aid and to determine in which areas it

had proved to be successful, and how its use could be made more effective” (Roby, 2006, p. 533).

The results showed no differences between the two groups on a cooperative test. However, on the fluency component, the first and second year lab groups scored significantly higher than the control group. On intonation, the second year lab group also scored significantly higher, and the third year laboratory group was significantly superior in listening (Roby, 2006).

Lorge’s second experiment tested two kinds of lab equipment: audio-active (head set with a microphone) and recording-playback (head set with a microphone and tape recorder). His results show that both groups using the technology scored similarly to each other, and both scored better than the control groups on both oral and written measures of vocabulary and grammar (Roby, 2006). What’s interesting here is that these results indicate that the use of the audio technology not only seemed to help the students on listening and speaking skills, but on writing skills as well. Lorge believed that in looking at these two studies together, there is an indication “of an overall advantage for the language lab” (Roby, 2006, p. 534). Finally, he noted that “a higher percentage of students in laboratory sections continued studying French beyond the three years required for high school graduation and college admission (Roby, 2006, p. 533).

Regarding the previous research on language labs, Roby suggests that although it does not always confirm the usefulness of the labs, “neither does it suggest that they are detrimental to language learning” (p. 537). This might imply that the usefulness of a language lab depends on the teacher using it and how

that teacher uses it. If a teacher believes as Elton Hocking, a leader in the language laboratory movement, did, she would agree that “sound brings language to life, and life to language” (Roby, 2006, p. 538).

Regarding the previous research on language labs, Roby suggests that although it does not always confirm the usefulness of the labs, “neither does it suggest that they are detrimental to language learning.” (pg. 537) This might imply that perhaps the usefulness of a language lab depends on the teacher using it and how it is used by that teacher. If a teacher believes as Elton Hocking, a leader in the language laboratory movement, did, she would agree that “sound brings language to life, and life to language.” (Roby, pg 538)

RECENT TECHNOLOGIES

As the research of the language laboratory suggests, foreign language teachers have been using technology in their classes for over a century. There is no doubt that the domestication of the personal computer has had a great impact on foreign language classes, and education as a whole. Years ago, education majors were given classes on educational technology that instructed them on the proper use of the overhead projector. Now, there are degrees offered in educational technology that instruct them on various technologies, many of which are used via the personal computer. Practicing teachers, too, have become educated on the uses and benefits of technology in the classroom (as well as in teacher meetings or in-services). Oblinger notes, “an increasing number of instructors are experimenting with alternative media formats in their

classrooms“ (p. 72). She goes on to report on various reasons behind the use of multimedia projects, saying that they...

- Motivate students to participate
- Integrate multiple skills
- Create practical reasons for reading, writing, and revising communication
- Require students to analyze sources and think about evidence in new ways
- Require higher-order thinking and problem-solving skills
- Let faculty address multiple intelligences and learning styles
- Lead faculty to think about their students, classes and lessons in new ways (p. 72).

All of these reasons are applicable in every content area, including the foreign language class. What's more, when students are asked about what they do with technology in their free time, they usually answer with some form of social interaction, such as conversing, collaborating and playing games, (Oblinger, 2005) and as I have seen in the halls of our school, they are listening to music on their Mp3 players. All of these are activities that could take place through the use of the computer in the foreign language class, as well. The following discussion will be on technology tools that have been introduced to the foreign language class and their possible uses.

Digital Voice Files

As was discussed earlier, the phonograph was the first technology used in language labs. Their purpose was to allow students to hear native speaker

pronunciations and to compare them to their own. Over the years this process was made easier with the cassette recorder, but gains in ease of use were paid for by loss in sound quality. Today, digital voice recorders surpass the cassette both in convenience, mobility, and sound file sharing.

Most computers come with a voice-recording tool already installed. The teacher needs only to plug in a microphone and possibly headphones to allow students to listen and record very easily. These sound files have a maximum recording time of 30 seconds, which can prove difficult for students to finish their activity. However, it is possible to combine two (or more) 30-second files into one, allowing for students to create longer recordings. Because the recording and listening process is so quick and easy, the students are able to listen to their own recording and re-record if they choose. The production of the voice files offers the student a “command of the moment that is tempered with deliberation and increased self-awareness,” (Gamlin, 2005, p. 53) making the learning more student-centered and meaningful. It is equally as easy for the teacher to listen to and assess the short student files, so they can offer “frequent glimpses into students’ interlanguage development” (Volle, pg 156).

Gamlin (2005) suggests many positive aspects of using these digital voice files, such as:

- To personalize content and thus make it more meaningful to learners
- The act of recording also lends permanence to learners’ creative, though not always original, performance

- It allows manipulation and heightens self-awareness
- It has an intrinsic playful appeal to the learner
- Instructors can once again listen to each individual student output regardless of class size or time, while students can be sure that their effort will not go unnoticed
- The transition from analog to digital voice media at this stage paradoxically brings with it increased individualization for the learner along with an expansion of the learner's community (p. 54)

Today, foreign language classes are sometimes offered online. Some of the downfalls of this format for a language class have been that they didn't allow for students to practice their speaking skills and receive feedback from their instructor on their speaking practice. In a 2001 study by Felix, students listed the "lack of speaking practice" first on their list of disadvantages for using Web-based programs (Barr, Leakey and Ranchoux, 2005, p. 55). Other responses high on their lists were "distraction," "no interaction with peers," "inadequate feedback," and "absence of teacher" (p. 47). The incorporation of digital voice files has helped the situation. The voice files can be saved on the computer and uploaded into the online courseware or submitted via email to the instructor. The instructor may also produce her own recordings (or download some from another site) and use them as content within the online class. "Once digital sound becomes part of the online learning environment, it may also be considered as an oral text within a visual interface" (Gamlin, 2005, p. 53).

Electronic Discussion

Another technology that has been recently introduced to the foreign language classroom (virtual or not) is the online discussion and chat. These have been natural inclusions to the online learning environments of distance education classes, but they are now starting to be seen for their value in face-to-face foreign language classes as well. Many researchers suggest that electronic communication differs linguistically from both traditional written and spoken discourse, and that these differences can be exploited for pedagogical advantage.

Warschauer, (year), conducted a study comparing online discussion with face-to-face discussion. His findings show that electronic discussion can be a good environment for fostering the use of more formal and complex language, both lexically and syntactically (p. 20). For example, Warschauer found that the electronic discussions tended to include more formal expressions, such as “in my opinion,” “over all,” “based on my experience,” “such as,” and “therefore,” which Warschauer reports were virtually absent from the face to face discussions (p. 20). However, in contrast, he reports that the face-to-face discussions used more informal expressions, such as “because,” “like,” “you know,” and “I guess” (p. 20). Warschauer also suggests that these results are not surprising, as written communication has generally always been more formal than face-to-face discussion (p. 21).

Another difference Warschauer noted was that the electronic discussion had fewer interactional features such as questioning, recasting, confirmation

checks, and paraphrasing (p. 22). These features are often found in face-to-face interactions and are viewed as important for language learning. Comparatively, the electronic discussion exchanges were longer with the interactions sometimes being less direct. People were expressing their own ideas as opposed to directly answering questions. This indicates that the electronic discussion participants were focusing more on meaning making than on the interchange in communication. This idea is backed by the findings of Abrams, who suggests that training with synchronous chat can help students produce more “idea-units” than training with face-to-face discussion and asynchronous discussion boards (Volle, 2005, p. 147).

Other researchers have found similar results that might prove beneficial to the foreign language learner. Chun, as an example, believes that electronic discussion is much like written texts in terms of language complexity, yet it resembles face-to-face discussion in terms of functions performed. Therefore, he suggests the electronic discussions can serve as an important bridge for transfer of communication skills from the written to the spoken domain, an important idea concerning the current study (Warschauer, year?). Beauvois and Kim also suggest that there is a link between written and oral production in support of Chun’s transferability findings (Volle, 2005).

Kern compared synchronous chat with face-to-face oral discussion in a second semester French class and noted that there was a larger quantity of language use in the electronic chat as opposed to the face-to-face oral discussion. He suggests that network-based chat should be used to facilitate

classroom discussion, but not as a replacement of face-to-face oral discussions (Volle, 2005). And, Payne and Whitney (2002) compared the amount of time students spent in face-to-face discussions to that in synchronous chats. They found that by participating half of the time in a synchronous online environment and the other half in face-to-face discussions produced more oral proficiency development than for those students in face-to-face discussions only (Volle, 2005).

One other important finding regarding the use of online discussion is that it may create opportunities for more equal participation in the classroom. Further, this may be achieved without disadvantaging more verbal students (Warschauer, year?). Many studies report the finding that electronic discussions are decidedly more balanced in participation from the students. In one study discussed by Warschauer, the lack of oral fluency and discomfort in speaking out are important factors in determining students' relative participation in face-to-face and electronic communication. Although those students who lacked confidence in their fluency still participated less than those with confidence, the amount that they did participate was still more in the electronic format than it was in face-to-face discussion. And, they reported feeling less stress during the electronic discussions (Warschauer, year?, p. 21).

There have also been studies on the use of email to foster communication in authentic ways in the foreign language classroom. The results have been varied. For example, Van Handle (1998) used email with intermediate foreign language German students for learner-to-learner exchanges. It was found that

the quality of messages was enhanced but not the accuracy (Volle, 2005).

Gonzaloez-Bueno's 1998 study looked at third semester foreign language Spanish students' use of emailed journal entries and found no effect on accuracy. However, the quantity of words used in the entries increased, (Volle, 2005) which matches the findings in many of the online discussion studies.

In 1999, Aitsiselmi used email with first and second semester foreign language French students in a non-native speaker to native speaker exchange. He found that the email pattern of communication resembled oral face-to-face chats. The students reported that the activity was similar to speech, saying that the message was more important than grammatical accuracy (Volle, 2005). This is a variance to the electronic discussion results that showed the online discussions to be more formal than face-to-face discussions. Finally, Stockwell and Harrington's 2003 study of a five-week email exchange between advanced learners of Japanese and native speakers resulted in significant increases in syntax, lexicon, and proficiency (Volle, 2005).

In conclusion, the fact that electronic and face-to-face communications differ so greatly does not mean that one should be used in place of another. The more complex and formal language in the electronic mode can potentially be beneficial to all students since it may help them to learn more sophisticated communicative skills. Warschauer suggests that they are probably best used with different purposes in mind (p. 22). He agrees with Chun's idea of transferability, suggesting that electronic discussion be used as a prelude to oral

discussions and that they should be used in different ways to highlight the advantages of each (p. 22).

iPods and Podcasting

Two of the newest technologies available to foreign language teachers are Mp3 players and Podcasts. According to Chan (year), this may offer the “best of both worlds” in audio by combining the benefits of the broadcast nature of radio with the flexibility, learner control and personalization afforded by the recorded audio (p. 64). Through Podcasting, audio content from one or more subscribed feeds (channels) can be automatically downloaded to one’s computer as it becomes available, then later transferred to an iPod or other portable media player, to be listened to at a time and place convenient to the owner. Users who do not have access to a portable music player can simply listen to the content on their personal computer (Chan, 2005, p. 65).

According to Chan, “Podcasting provides a low-cost, low-barrier tool for disseminating content across the Internet. The prohibitively large bandwidth requirements of streaming audio and video, which by definition involves playing this media while it downloads from across the Internet, often lead to poor performance for many users, leading to a “click and wait” situation that negatively affects the quality of the listening/viewing experience” (p. 65). Faculty members across the country are discovering that Podcasting allows them to share lectures, updates, or additional material with students in a format that provides the flexibility desired by a highly mobile, busy student population (Oblinger, 2005).

Among the educational institutions that have begun using Podcasts are Georgia College and State University, Duke University and Drexel University (Chan, 2005). (Denise, I haven't found any research from these places yet that I felt could be used here. Also, I know ISU is doing something with Podcasts, but I haven't had a chance to look into it yet!)

Different from the "image problem" the language labs of the past have had, the iPods are quite popular with the American population (could quote some statistics from Apple?) iPods and Mp3 players are "socially acceptable" in public places. They fit into today's students' lifestyle have a tremendous consumer appeal (Chan, 2005). Teachers have an opportunity to use this to their advantage.

Creating a Podcast is simple and inexpensive. One only needs to use the same voice recording program from their personal computer mentioned previously and possibly some editing software to create the files. However, Chan offers a word of caution when creating them. He suggests that one design the audio learning material in adherence to the metaphor of a song, saying "there's a reason most songs are less than four minutes. If you haven't gotten to the hook by then, you're not going to make it the next nine" (p. 67). This suggests that students will begin to tune out if the material takes too long to get the important information. He further suggests that a teacher think about the lives of her students and when they might be listening on the go. My students, for example will often travel between two nearby towns to get from school to home. This trip would take them approximately 10 minutes. So, following Chan's advice, I might

consider making a Podcast no longer than seven or eight minutes. This would allow my students to listen to the entire cast before reaching their driveway.

One final suggestion from Chan that I hope to use in my research is to allow students to be involved in the creation of Podcasts (p. 67.) As of yet, I have not found any research on the effects on learning that creating Podcasts can have on students, but I have heard and read of schools that are doing it now. It will be interesting to see the results. I can see the possible value of allowing students to hear native speaker models as was used with the phonographs and cassettes of years passed. But, I can see the Podcasts going further into the culture of the foreign languages. Students might listen to a lecture from a foreign country, or perhaps a poetry reading, a popular song of the day, or a press release on a current event in the target language. Anything that the teacher provides for her students could then be used as a discussion prompt, either via electronic discussions or face-to-face discussions in the classroom. The possibilities seem endless.

A word of technological caution

As most educators would agree, whatever learning technology is used in a classroom, it should be used in support of the learning activity and not be independent of it. There are many research studies on the effects of technology in education and not all of them show a significant increase in the amount of student learning. As a result, teachers need to be somewhat pragmatic in their use of technology, using it when it actually makes a difference to the learning process. Oblinger states, "It is not the technology that is most important, but the

activity it enables; the activity, not the technology is what advances learning” (p.

72). Table 1 below comes from Barr et al (pg. 76) and demonstrates that

technology is not always the best way for students to learn and practice oral

Benefits of Computer Technology in Oral Language Development	Benefits of Technology-free Oral Language Development classes
Monitoring	
<ul style="list-style-type: none"> • Tutors can monitor and intervene unobtrusively in students' activities in a number of ways that are not available in analogue language lab facility or traditional classroom context (keyboard, screen and mouse control). 	<ul style="list-style-type: none"> • Monitoring and intervention is less discreet in traditional classroom context.
Pronunciation	
<ul style="list-style-type: none"> • Students can listen repeatedly to the recording of their own efforts against the standard of the native speaker • Students have individual access to resources on the Web, which give coaching in pronunciation, extending the boundaries of the classroom. 	<ul style="list-style-type: none"> • Sometimes a student can go through a whole class without having spoken more than seconds/ a few minutes of French • Students cannot hear their own voice played back to compare against the native speaker or after correction • The tolerance threshold of the teacher is variable and can be more flexible than CALL packages.
Responding spontaneously in a conversation	
<ul style="list-style-type: none"> • Possibility for distance learning through computer-mediated video conferencing software, with target language institutions • Development of banks of role plays that are accessible on demand 	<ul style="list-style-type: none"> • Traditional class lends itself better to this form of interaction
Responding to visual or aural input (eg. From TV/Radio)	
<ul style="list-style-type: none"> • A digital lab with streamed digital video/audio providing individual access and control of PLAY/PAUSE/ REWIND functions and the recording of student responses to stimuli or questions. Teacher can also take control of student consoles 	<ul style="list-style-type: none"> • The traditional approach with one teacher and access to just one TV/Video/DVD player does not allow for individual control -- the advantage of this is that the teacher may not always want the students to have control.
Taking an active part in a group discussion	
<ul style="list-style-type: none"> • Possibility for distance learning through computer-mediated video conferencing software, with target language institutions 	<ul style="list-style-type: none"> • Traditional classroom is better suited to this activity in the same room.
Giving a presentation	
<ul style="list-style-type: none"> • Advantage of a multimedia lab would mainly be for those presentations where the presenters wish for the audience to take an active part in looking at/hearing and responding to material on line • Best advantage at a distance 	<ul style="list-style-type: none"> • More suitable where audience are in passive mode and where the presenters wish their faces to be seen by audience

Table 1. Comparative Benefits of a CALL and Non-CALL Environment for Oral Language Development Classes

skills.

However, there is definitely something to the belief that technology motivates students. I have seen it within my own classrooms and I have read several studies where student interview responses showed that the technology aspect of the class was what they liked the most. This idea leads us into the next area of discussion: the effects of anxiety of language learning.

ANXIETY

There can be no doubt that asking a student to speak in a foreign language--using words, grammatical structures and sounds to which they are not accustomed—can be extremely stressful. The fact that we ask them to do this in front of their peers and that their performance will be assessed only makes the situation worse. Add to that the use of technology for students that are not so technologically advanced, and it seems amazing that foreign language classes have any students at all!

As educators, we must keep in mind the importance of attitudes and motivation in the foreign language learning process. Affective factors determine the effort a student makes in and outside of the classroom to obtain input and to use the language for communicative purposes (Schulz, 1991). They can also interfere with memory, attention, and concentration, not to mention be emotionally draining (Chan, 2005).

Chan suggests that the issue of student anxiety can be addressed by the use of “appropriate teaching methods, and the demonstration of effective teaching behaviors within the classroom” (p. 61). Some activities he suggests

are peer instruction, mentoring and pair/group work. One other recurring theme in this area is the idea of using technology as a pre-class “ice-breaker.” For example, the foreign language lab at Purdue was used for “pre-drilling the students on the French text of the basic grammar or reading lesson that was to be covered in class” (Roby, 2006). Another suggestion was to use Podcasts as an introductory activity so that students would enter a class already having an idea of what each class would entail (Barr et al.,2005). This seems similar to the idea of asking a class to read a chapter in a textbook before the next class, though. And, speaking from experience, those chapters only get read by a few students. However, with the idea being to alleviate anxiety, students might see this as an opportunity to feel more comfortable in class and actually be self-motivated to prepare themselves accordingly.

Another idea that was mentioned in the literature many times is along the lines of “success breeds success.” In other words, if a student is able to achieve success early in a foreign language program, he or she will be more likely to continue with the program even past the minimum graduation requirements of the school or university. This makes the necessity of lower anxiety in foreign language classes that much more important. [\(obviously, I need more input here\)](#)

SUMMARY

The language labs of the past are nothing like those of today. The current levels of technology allow students to practice every area of the language from listening and speaking to reading and writing. Unfortunately, the literature of the

past does not help us to understand fully the value of the labs or the ways in which they can best be used, as many of the studies were ambiguous in comparison to each other. Further, many of the tools used today are so new that there has not even been time for research studies to be completed, as is the case with the Podcasts.

As for the technology tools themselves, one can expect that they will be forever changing and improving their uses for educational purposes. Just as the labs moved from phonograph to radio to audiocassette to VCR and to computer, the tools of today will likely be “old news” in just a few years. A major implication of the constantly changing technology is that teachers must be provided with the proper training for their uses, or else the teachers simply won’t use them. As for the purposes of the current study, the literature made an important point that students will do best when given a mixture of technology and face-to-face activities and that a good use of the technology might be as preparatory work for in-class activities.

Another important teaching implication from the current review is that, as educators, we must realize the importance of motivation in the foreign language learning process. Affective factors determine the effort a student makes in the classroom as well as the length of time they remain in the foreign language program. (I’m not happy with this conclusion—will re-work.)

REFERENCES

- Barr, D., J. Leakey, and A. Ranchoux. "TOLD Like it is! An Evaluation of an Integrated Oral Development Pilot Project." *Language Learning & Technology* 9 (2005): 55-78.
- Chan, A. and M.J.W. Lee. "An Mp3 a Day Keeps the Worries Away: Exploring the use of podcasting to address preconceptions and alleviate pre-class anxiety amongst undergraduate information technology students." *Good Practice in Practice. Proceedings of the Student Experience Conference* (2005): 59-71.
- Gamlin, G.."DigitalVoice Recordings in Online Learning Environments." *Paccall Journal* 1 (2005): 53-62.
- Horwitz, E. "The Beliefs About Language Learning of Beginning University Foreign Language Students." *Modern Language Journal* 72 (1998): 283-294.
- Oblinger, D. "Learners, Learning & Technology." *EDUCAUSE Review* (2005): 67-75.
- Roby, W. "Technology in the Service of Foreign Language Learning: the case of the language laboratory." *Foreign Language Learning* Retrieved March 1, 2006 from www.aect.org/edtech/19.pdf.
- Schulz, R. "Second Language Acquisition Theories and Teaching Practice: How Do They Fit?" *Modern Language Journal* 75 (1991): 17-26
- Vandergrift, L. "Second Language Listening: Listening Ability or Language Proficiency?" *The Modern Language Journal* 90 (2006): 6-18.

Volle, L. "Analyzing Oral Skills in Voice E-Mail and Online Interviews." *Language, Learning & Technology* 9 (2005): 146-163.

Warschauer, M. "Comparing Face-to-Face and Electronic Discussion in the Second language Classroom." *CALICO Journal* 13 (year?): 7-26.